

ABSTRACT OF THE DISCLOSURE

An adaptive quality control loop for link rate adaptation that adaptively selects optimal channel condition thresholds in real-time without measuring all the factors that affect selecting channel condition thresholds. The adaptive quality control loop involves adjusting the
5 channel condition thresholds with variable up and down steps based on target quality metrics along with measurements such as error detection results, relative frequencies of visiting each modulation and/or coding schemes (also referred to as "MCS levels") and transmitted data rates. In one embodiment, the adaptive quality control loop comprises the step of adjusting a channel condition threshold based on a error detection result for a data packet transmission using a
10 variable step. The channel condition threshold is associated with an MCS level used in the data packet transmission.